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IN D.O.

REPORT ON BOILERS.

No. 23983

Received at London Office 20 OCT 1949

Date of writing Report 19th OCT. 1949 When handed in at Local Office 18th OCT. 1949 Port of GREENOCK

No. in Reg. Book. Survey held at GREENOCK Date, First Survey 18th AUGUST 1948 Last Survey 23rd SEPTEMBER 1949

on the S.S. JALAPADMA (Number of Visits. ✓) Tons Gross. Net.

Master Built at VIZAGAPATAM By whom built SCINDIA STEAMSHIP CO. LD. Yard No. When built.

Engines made at GREENOCK By whom made JOHN G. KINCAID & CO. LD. Engine No. 791 When made 1949

Boilers made at do By whom made do Boiler No. 791 When made 1949

Nominal Horse Power 524 Owners SCINDIA STEAM NAVIGATION CO. LD. Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel COLVILLES LD. (Letter for Record)

Total Heating Surface of Boilers 7563 ✓ *Three Boilers* Is forced draught fitted *Yes* Coal or Oil fired *Coal*

No. and Description of Boilers *Three return tube single ended* Working Pressure 220 lbs ✓

Tested by hydraulic pressure to 380 lbs ✓ Date of test 25-8-49 No. of Certificate 2547 Can each boiler be worked separately *Yes*

Area of Firegrate in each Boiler 63.25 ✓ No. and Description of safety valves to each boiler 2 1/4" GM. 1 HL Double opening ✓

Area of each set of valves per boiler { per Rule 6.705 sq. in. as fitted 7.96 sq. in. Pressure to which they are adjusted Are they fitted with easing gear *Yes*

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler ✓

Smallest distance between boilers or uptakes and bunkers or woodwork Is oil fuel carried in the double bottom under boilers *No*

Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated

Largest internal dia. of boilers 14'-10 9/16" ✓ Length 11'-6" ✓ Shell plates: Material S Tensile strength 29/33 tons ✓

Thickness 1 7/16" ✓ Are the shell plates welded or flanged *No* ✓ Description of riveting: circ. seams { end DR inter ✓ } long. seams { 1 5/32" ✓ } 1 7/16" ✓ Pitch of rivets { 4.158" ✓ } 9.8125" ✓ 28/12/49

Percentage of strength of circ. end seams { plate 64.6 % ✓ rivets 44.89 % ✓ } Percentage of strength of circ. intermediate seam { plate 85.3 % ✓ rivets 85.9 % ✓ } Working pressure of shell by Rules 221 lbs.

Percentage of strength of longitudinal joint { plate 85.3 % ✓ rivets 85.9 % ✓ combined 88 % ✓ } Thickness of butt straps { outer 1 3/32" ✓ inner 1 7/32" ✓ } No. and Description of Furnaces in each Boiler *Three Morrison corrugated* ✓

Material S Tensile strength 26/30 tons ✓ Smallest outside diameter 3'-9 1/2" ✓

Length of plain part { top ✓ bottom ✓ } Thickness of plates { crown 3/4" ✓ bottom ✓ } Description of longitudinal joint *Weld* ✓

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules

End plates in steam space: Material S Tensile strength 26/30 tons ✓ Thickness 1 1/32" ✓ Pitch of stays 21" x 18 3/4" ✓

How are stays secured *DN & loose washers* ✓ Working pressure by Rules

Tube plates: Material { front S back S } Tensile strength { 26/30 tons ✓ } Thickness { 7/8" ✓ } 1 1/16" ✓

Mean pitch of stay tubes in nests 8.43" Pitch across wide water spaces 1'-1 1/2" ✓ Working pressure { front back } ✓

Girders to combustion chamber tops: Material S Tensile strength 29/33 tons ✓ Depth and thickness of girder at centre 10" x 1 1/2" ✓ Length as per Rule 2'-9 5/8" ✓ Distance apart 8 1/4" ✓ No. and pitch of stays in each *Three @ 8"* ✓ Working pressure by Rules

Tensile strength 26/30 tons ✓ Thickness: Sides 1 1/16" ✓ Back 1 1/16" ✓ Top 1 1/16" ✓ Bottom 1 3/16" ✓

Pitch of stays to ditto: Sides 8 x 8 1/4" ✓ Back 8 x 9" ✓ Top 8 x 8 1/4" ✓ Are stays fitted with nuts or riveted over *Yes* ✓

Working pressure by Rules Front plate at bottom: Material S Tensile strength 26/30 tons ✓

Thickness 7/8" ✓ Lower back plate: Material S Tensile strength 26/30 tons ✓ Thickness 7/8" ✓

Pitch of stays at wide water space 14" x 9" ✓ Are stays fitted with nuts or riveted over *Yes* ✓

Working pressure Main stays: Material S Tensile strength 28/32 tons ✓

Diameter { At body of stay 3/4" ✓ or Over threads } No. of threads per inch 6 ✓ Area supported by each stay

Working pressure by Rules Screw stays: Material *Woot iron* ✓ Tensile strength 21 1/2 tons ✓

Diameter { At turned off part 1 5/8" 1 3/4" ✓ or Over threads } No. of threads per inch 9 ✓ Area supported by each stay

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Working pressure by Rules..... Are the stays drilled at the outer ends. *No* Margin stays: Diameter { At turned off part, *1 1/2" x 3"* or Over threads.....
No. of threads per inch *9* ✓ Area supported by each stay..... Working pressure by Rules.....
Tubes: Material *Hot rolled seamless steel* ✓ External diameter { Plain *2 1/2"* ✓ Stay *2 1/2"* ✓ Thickness { *9/16"* *3/8"* *7/16"* ✓ No. of threads per inch *9* ✓
Pitch of tubes *3 1/2" x 3 5/8"* ✓ Working pressure by Rules..... Manhole compensation: Size of opening in shell plate *16 1/2" x 20 1/2"* ✓ Section of compensating ring *2' 8 1/2" x 3' 1" x 1 1/32"* ✓ No. of rivets and diameter of rivet holes *42 @ 1 5/32"* ✓
Outer row rivet pitch at ends *10"* ✓ Depth of flange if manhole flanged *M. Reil type door* ✓ Steam Dome: Material *...*
Tensile strength..... Thickness of shell..... Description of longitudinal joint.....
Diameter of rivet holes..... Pitch of rivets..... Percentage of strength of joint { Plate..... Rivets.....
Internal diameter..... Working pressure by Rules..... Thickness of crown..... No. and diameter of stays..... Inner radius of crown..... Working pressure by Rules.....
How connected to shell..... Size of doubling plate under dome..... Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell.....
Type of Superheater..... Manufacturers of { Tubes..... Steel forgings..... Steel castings.....
Number of elements..... Material of tubes..... Internal diameter and thickness of tubes.....
Material of headers..... Tensile strength..... Thickness..... Can the superheater be shut off and the boiler be worked separately..... Is a safety valve fitted to every part of the superheater which can be shut off from the boiler.....
Area of each safety valve..... Are the safety valves fitted with easing gear..... Working pressure as per Rules..... Pressure to which the safety valves are adjusted..... Hydraulic test pressure: tubes..... forgings and castings..... and after assembly in place..... Are drain cocks or valves fitted to free the superheater from water where necessary.....
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with.....

The foregoing is a correct description,

For JOHN G. KINCAID & CO., LTD. Manufacturer.

Dates of Survey while building { During progress of work in shops - - - During erection on board vessel - - -

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval) Total No. of visits

Is this Boiler a duplicate of a previous case *YES* If so, state Vessel's name and Report No. *GRK FF N° 23226*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

These boilers have been constructed under Special survey in accordance with the Rules and approved plans. The materials & workmanship are sound & good. The boilers have now been shipped to Vizagapatam, to be installed in a vessel to be built at that Port. Please see machinery report for recommendations Greenock FF N° 23983.

Survey Fee £

Travelling Expenses (if any) £

When applied for.....19.....

When received.....19.....

Charles H. Hunter

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW*

Assigned *See Machy. Rpt.*

See F. E. Machy. Rpt.



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